

AMENDMENTS TO THE CLAIMS

Listing of Claims:

1-16. (canceled)

17. (currently amended) A method of determine the birth date of a tooth enamel in an animal comprising the steps of:

(a) collecting a sample of said tooth enamel from an animal; wherein said tooth enamel is purified away from other carbon containing molecules of said animal;

(b) determining a ~~delta~~⁻¹⁴ delta ¹⁴C value of the carbon atoms in said tooth enamel; and

(c) comparing the ~~delta~~⁻¹⁴ delta ¹⁴C value with a calibration ~~delta~~⁻¹⁴ delta ¹⁴C chart and determining a birth date of said tooth enamel, wherein the birth date of said tooth enamel is determined to within 5 years of its actual birth date.

18-20. (canceled)

21. (previously presented) The method of claim 17, wherein said animal is selected from the group consisting of a human, a horse, a pig, a cow, a rabbit, a dog, a rat and a mouse.

22. (currently amended) The method of claim 17, wherein said ~~delta~~⁻¹⁴ delta ¹⁴C value is determined by an accelerator mass spectrometer (AMS).

23. (previously presented) The method of claim 17 further comprising a step of calculating a birth date of said animal from the birth date of said tooth enamel.

24-31. (canceled)

32. (currently amended) The method of claim 17 wherein said calibration ~~delta~~⁻¹⁴ delta ¹⁴C chart is selected from a calibration ~~delta~~⁻¹⁴ delta ¹⁴C chart shown in Figure 1.

33. (currently amended) The method of claim 17 wherein said ~~delta~~⁻¹⁴ delta ¹⁴C chart is selected from the group consisting of a chart shown in Figure 1A, Figure 1B, Figure 1C, Figure 1D and Figure 1E.